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ORGANIZED LABOR'S ATTITUDE TOWARD INDUSTRIAL EFFICIENCY

In a recent article one of the foremost efficiency engineers of the country, referring to the adoption of the system of scientific management in industrial establishments, predicts that it will mean "for the employers and the workmen who adopt it, and particularly those who adopt it first, the elimination of almost all causes for dispute and disagreement between them."

The spokesmen of organized labor seem to take a different view of the matter. Their attitude is partly one of hostility, partly of suspicion. Are the principles of trade unionism and scientific management in irrepressible conflict? Can one survive only by crushing the other, or is their opposition an accident due to imperfections which may be corrected, so that both can flourish together?

It is sometimes argued that trade unions would be of greater advantage to workingmen if they would make the production of wealth their main object and abandon altogether their restrictive policies. But I consider that production is the business of the employer, and that, if a union turns itself mainly to production, it can do so only by becoming its own employer—that is, by becoming a coöperative society.

As a matter of fact, modern trade unionism is a survival of all kinds of experiments in organization, including coöperation, politics, and joint membership of employers and workmen; and it has survived only to the extent that it has chosen to enforce policies that restrict the employer. Labor has never been able to compete with the employer, as coöperation requires. Those coöperative societies which have succeeded, like the coopers and molders, have done so by becoming employers, and are now simply successful corporations employing hired labor. Those which have failed did so only after leaving behind them a wake of wreckage of other wage earners hired by regular employers; for they kept their heads above water only by generously failing to pay themselves full wages in order that they might cut prices, and thereby they weak-

ened the ability of competing employers to pay full wages. Thus a labor organization that devotes itself to production travels a disastrous circle. It fails, whether it succeeds or fails.

Conscious of the futility of trying to cope with the employer on his own ground, modern trade unionism contents itself with trying to tie his hands. Its policies are necessarily restrictive. If it cannot prevent the employer from doing as he pleases at some point or other, it is something besides a trade union. The real questions are, whether its restrictions are injurious or beneficial? to whom? and who is to decide?

Again, it is sometimes charged that unions are organized mainly to foment trouble, especially strikes. The fact is, that unions came into existence after periods of strikes, and were thought by workmen to be the means of getting their demands without strikes. The modern idea of a permanent trade union is coincident with the ideas of negotiation, arbitration and finally of trade agreements, with their permanent joint boards and periodic joint conventions for the settlement of differences. Experience has shown that it has not been difficult to win strikes in periods of prosperity, but it has been impossible to retain the fruits. Consequently, to the experienced unionist, the preservation of his union has come to be more important than winning strikes.[1] And nearly all of the restrictive policies of which complaint is made spring from the effort to preserve the union. The irrepressible conflict, therefore, if there is one, between unionism and scientific management, will be found at the points where management weakens the solidarity of unionism. Other points of conflict are incidental. These are irrepressible. The real question here is this: Can scientific management deal scientifically with organizations as well as individuals? Is there a science of industrial organization as well as a science of engineering details?

The history of the stove molders and stove foundrymen will assist us.[2] Long before management became a science the stove foundrymen had practiced its principles. For forty years, prior to 1890, they were working out the problem of efficiency details.

[1] This conviction first became dominant in labor organizations in the decade of the fifties, both in England and the United States. See *Documentary History of American Industrial Society*, vols. 7 and 8, period of 1840-1860. (Cleveland: A. H. Clark Co. 1910.)

[2] See *Bulletin of Labor*, No. 62, Jan., 1906, U. S. Bureau of Labor, article by Commons and Frey on "Conciliation in the Stove Industry."

Competition forced them to learn by experiment and to spread by imitation what science learns by observation and measurement, and spreads by propaganda. They learned to subdivide labor so that a three-dollar man would be kept on three-dollar work and never be permitted to turn his hand to what a dollar man could do. They had, of course, some crudities which science would eliminate, such as piece rates instead of premiums, prizes and bonuses; but these differences I consider unessential, for they agreed on the essential thing of playing on the motives of individual workmen to stimulate output, regardless of the effect on other workmen and other employers. The consequence was, that for forty years every step towards greater efficiency and greater output per man brought a cut in prices of stoves; and every cut in the price of stoves took away by so much the employers' reward for efficiency; every loss of profit forced employers to cut the piece rates of wages; every cut in piece rates forced the wage-earners to greater output for the same earnings; and so on, around the vicious circle of futile efficiency.

Now, that circle is very familiar to wage-earners in every business. It is so familiar that they take it as a matter of course, and therefore usually fail to state their case against efficiency, or their case for restrictions; just as it might not occur to them to explain an aeroplane disaster by the attraction of gravitation. Even where monopoly or special privilege prevails, and competition does not force friendly employers into the ranks of hostile employers, the thing that is equally plain is the infinite capacity of bonds and stocks to absorb every gain from the efficiency of labor. The sugar trust, the steel trust, and other trusts that might be mentioned, are not hopeful inducements to wage-earners to take an interest in scientific increase of output. Fear and greed may coerce exertion, but somewhere along the road ahead of them, they see the bonus foreman, the profit-sharing superintendent and the absentee stockholder ready to relieve them of their increased product.

As regards the stove molders, they tried coöperation as early as 1847 and often thereafter, in the vain endeavor to avoid strikes. Along with this they became the most persistently violent and restrictive of all labor organizations, or rather of all attempts to form a permanent organization. To prevent employers from cutting piece rates and to build up a compact union, they established the rules that apprentices should be limited; that no man should be allowed to work with the aid of helpers; that no man should be al-

lowed to earn more than a fixed wage set by the union. And then, to enforce these rules, they fined and expelled the violators and established and violently enforced the other rule that union men should not be allowed to work with non-union men. Finally, this anarchy of individual efficiency brought its correction in the form of a representative government in control of the industry. This is the trade-agreement, or joint conference system, that has preserved industrial peace in the stove foundry business for over twenty years. It governs the employer as firmly as the employee. The employer who cuts a piece-rate is expelled from the employers' association and is left alone to defend himself against the union. The union has removed its restrictions on output, and every man is left to earn as much as he wishes, without the fear of menacing his own or others' wages. It required some fifteen years of the agreement system to bring about this final result, so inveterate and abiding had been the distrust by the union of the employer's power and will to restrain himself from seizing upon the efficiency earnings. Many of the other rules of this interesting system of industrial organization are worth while to the student of industrial efficiency. Throughout these rules run the two conflicting principles—efficiency and restriction—both of them brought into a kind of equilibrium by the higher principle of organization.

I do not mean to say that the trade agreement system of the stove industry is the only form of organization that scientific study and ingenuity can work out for modern industry. Nor do I mean to say that in that system they have themselves as yet worked out all of the problems and yoked organization to efficiency so that they will always run lovingly together; nor that the consumer will not ultimately demand a voice in their councils. Nor do I mean to say that efficiency engineers are not taking into account the problems of organization as well as individual output, nor that the hostility of unions is a discriminating and reasoning hostility. What I do mean to say is this: the employer's business, as business now goes on, is to attend to the increase of efficiency; the wage-earner's business is to sell himself to do the employer's bidding for a period of time. The two interests are necessarily conflicting. Open conflict can be avoided in three ways: by the domination of the employer, as in the steel trust today; by the domination of the union, as in the iron industry prior to the Homestead strike; by the equal dominion of the two interests, as in the stove-foundry business today. The first and second methods do not

solve the problem; they suppress it. The third meets it in the same way that similar conflicts are met in the region of politics, namely, a constitutional form of organization representing the interests affected, with mutual veto, and therefore with progressive compromises as conflicts arise.

These are certain general bearings of the question. They indicate the fields for investigation. It is the business of science to work out the details and to combine details into workable systems. I have suggested the comparison of the early empirical systems of efficiency with the modern scientific systems. The modern systems are certainly a great advance on the early ones. All of the systems have this in common, that they recognize the principle of a minimum wage, which the old theory of wages disregarded. Here it seems that the long struggle of organized labor has received the sanction of science, and that the principle of efficiency is to be abandoned when it is not adequate to support the standard of living. The unions have contended that the minimum wage is not the same as a maximum. They permit the employer to pay more than the minimum if he wishes to do so. Now comes the scientific engineer and takes them at their word and does it in such a precise and mathematical way that there can be no doubt of his devotion to truth. It seems illogical in the unions to stand out against a system so carefully based on what they themselves have fought so long to get. Perhaps their ground of dislike is only sentimental. Indeed they do not like the engineer's quite impersonal methods of investigation and recommendation. They know that he is hired by the employer to advise him how to get the greatest output at the least cost. The engineer studies how to economize the forces of nature embodied in physical capital and the forces of human nature embodied in men. He can hardly make the same distinction between the two that the workman makes. The stop-watch, the special slide rule, the speedometer, the time-testing laboratory, have the same use applied to both. The "fatigue curve" is unfeelingly figured out so as to show the speed at which each human machine should run in order to insure its longest life and greatest efficiency.

The older theory of labor, when the merchant was in control, was resented by the workman as a commodity theory, for it looked upon the price of labor as governed by demand and supply, like the price of anything else. The engineer's theory is rather a machinery theory, for it looks upon labor as an ingenious and necessary

device, governed, indeed, not by laws of physics but by laws of psychology. This device has certain fixed charges which must be met in the fashion of maintenance, repairs and depreciation, by a minimum wage to support a standard of living. Over or under this, each individual differs from others, not perhaps in load, slippage, friction and other physical details which machinery takes over, but in the psychological motives that induce attention, continuity, watchfulness. Compensation is the inducement that evokes these motives, and compensation should be as nicely adjusted to each detail of psychology and effort as is the adjustment of an electric current to the machine it is fed into. The blacksmith's bonus should be greater than the machinist's because the blacksmith has to be induced to carry a greater load. And it is by nice experiment and comparison that the precise point is determined where the maximum ratio of output to ingo lies.

This theory and this practice are certainly more illuminating and hopeful than the commodity theory, but somehow they still lack something needed to arouse the approbation of the man investigated.

I am inclined to think that the lacking thing in the theory is the fact that it will be the employer, the foreman, the superintendent, and not the scientific engineer, who will carry it out in practice. The minimum wage is not so much a conclusion of science as an adjustment to circumstances. It represents the balance of two forces that are continually changing. If the wage contract were an ordinary contract enforceable at law, the engineer might install his system, tie it up, and then go away until the contract ran out. But the wage contract is practically a new contract every morning. The employee can quit, and the employer can discharge him, at any moment. The new employee may be taken on, or the old one taken back, at a different rate. Even without a conscious purpose to violate the promise, a period of unemployment is certain to break the connection between old and new employees, old and new contracts. If there is no authority and no bargaining power able to require that the new contract shall run the same as the old one, only good faith and self-interest will be left to decide it. This is as much as to say that the union man cannot conceive of a minimum wage without a union or a statute to enforce it.

The minimum wage indicates as its counterpart a system of extra pay for greater efficiency. The attitude of unions toward

the bonus system is hostile. Strong unions even stake their existence on forcing the issue against it. Even the Locomotive Engineers, the least chargeable of all unions with restrictive policies, required the Santa Fe Railroad officials to abandon it after a few months' trial. At the conference when this decision was reached, the heads of the organization avowed their willingness to coöperate, but said "so far as this prize system that you have at the present time, we are all afraid of it. We are afraid of the principle behind it." And he added in regard to the machinists, who had been defeated in their strike against the system, "I do not believe, had the old class of men remained here with their organization, that it ever would have been possible for you to put the bonus system in among the machinists in your shops."[3] This attitude of the engineers, the most favorable of all unions toward the policies of their employers, standing by the Santa Fe railroad for three or four years while it defeated the machinists and installed the system in its machine shops, but ready to invite the fate of the machinists in order to get rid of the same system applied to themselves, is conclusive of the hostile attitude of organized labor. In this case also, the engineers were standing against the least objectionable form which the bonus system has taken. It was not the form but the "principle behind it" that they resisted.

Reduced to its last analysis, the "principle" of the bonus system is the principle of individual bargaining instead of union bargaining. Union bargaining means more than the formal negotiations at the time when the schedule of wages is made up. It means continuous oversight of each individual contract, and ability to require that it conform to the schedule. Its machinery must be something like that of a purchasing department with its testing laboratory to determine whether each delivery of goods comes up to the specifications. The fear of the unionist is the fear that his organization cannot cope with the infinite number of little variations from the schedule, or with variations that the schedule does not provide for.

The different bonus schemes differ materially in the degree to which they permit these variations. The earlier ones of Taylor, Halsey, Rowan[4] and others, differed but little from piece work.

[3] *Machinists' Journal,* Dec., 1910.

[4] See description of earlier systems in *Economic Studies of American Economic Association,* vol. I; also Commons, *Trade Unionism,* p. 274.

A bonus was figured on each piece above the standard number of pieces expected for the minimum wage. On certain days or pieces the man might make a bonus; on other days or pieces he would make less than the expected number. This close calculation works out into something like a task system, for the man who does not make a bonus is more expensive than others and is the first to lose his job. On the other hand those who make bonuses set the standards for comparison with others. In this way each individual is continually carrying on a bargain with his foreman, setting up his record of output as the claim on his job, while competition forces all to meet him with as good a bargain. The later systems, especially the Emerson cumulative system, eliminate the accidents and fluctuations of the earlier systems by figuring the bonus on a man's entire work for a month, rather than on each separate job or piece.[5] But they retain, of course, the essential feature of the individual bargain.

How difficult it is for a union to cope with these individual differences may be seen even in the collective bargaining of the strongest unions. The employers argue from the record of, say, the ten best men, and the employees from the record of the ten poorest men. The place where the minimum wage, or the piece rate, or the bonus rate, shall be placed, is partly a matter of evidence, partly a trial of strength. The evidence is seldom conclusive and, since laborers generally are the aggressive party, seeking higher wages, shorter hours and better conditions, the evidence is not enough to carry their point. This is a reason why arbitration by a disinterested third party is distasteful to them. And, since each side puts up only its strongest evidence, neither can be trusted to act on the evidence of the other, however scientific, except when confronted by equal bargaining power of the other. Even the exact methods of the efficiency engineer are only a more precise form of evidence and are not enough to settle a question which turns so much on matters of opinion and feeling governed by the bargaining power of the parties. To the extent that the individual bargain enters, the laborers, as a whole, are not able to make advance against the employer's defensive position. It is this fact, that so much depends on bargaining, and that bargaining is the daily contact of employer and employee, whereas efficiency records and standards are merely data for com-

[5] See description of Emerson's system in Engineering Magazine, series of articles, 1910-11.

parisons in bargaining, that gives occasion for the efficiency engineer often to explain the failure of his system by the "failure of employers to act on his recommendations." The fundamental defect is the failure to investigate, first the bargaining relations; then to organize these relations in such a way that conflicts of opinion and interest will be furnished a channel for expression and compromise; and then, last of all, to work out the standards and records under the direction of and subordinate to this organization of the bargaining relations. I do not pretend to say how this shall be done. It also is a matter for investigation in each case. I only contend that the individual bargain should be eliminated as far as possible and the collective bargain substituted.

Trade unionists, in this matter, are not different from non-unionists. The trade-unionist has merely secured power to do what the others would like to have done. I know of one huge "trust" which succeeded long ago in driving out organized labor, but which finds in all of its shops an inexplicable arrangement that prevents any man from earning more than a certain amount of money at piece rates. Perhaps scientific management and the bonus system would break down this apparent conspiracy, but I should expect it to recover after the men became familiar with the new devices. Nothing is more surprising often to employers and the merely scientific man, than the unanimity with which thousands of unorganized laborers will suddenly turn out on strike at the call of a few hundred organized laborers. It is their desperate recognition that the day of individual bargains is gone for them. And it would seem that a great corporation, representing thousands of stockholders speaking through one man, might be able to anticipate unionism by finding some means of scientific organization of labor before installing scientific management. In lieu of this, they wait until a union is formed, and then complain that it is hostile to efficiency. The example of the stove molders, which I have given, shows that their hostility to efficiency is the hostility to methods that take them at a disadvantage in their power of protecting themselves. When once they are guaranteed assurance, as in the foundry business, that this will not be done, they respond as reasonably as other people.

There are many attractive and important contributions which the efficiency engineers are making towards the solution of labor problems. Their careful study of the human element in production is notable, appearing in the greatest variety of applications under

the name of "welfare work." They are bringing forward issues that merely obstructive unionism will be compelled to meet in a spirit of coöperation or else go down. On the other hand, it is an uninformed opinion that persists in holding that the opposition of organized labor to industrial efficiency is merely obstructive and unreasoning. Organized labor is rather the organized expression of what labor in general would express if organized. To meet the avowed hostility of organized labor is to meet the instinctive hostility of nearly all labor, based on experience. It is not enough merely to adopt clever devices of compensation designed to separate laborers into individual bargaining units, for it is exactly this separation that competitive conditions are forcing laborers, as well as capitalists, to overcome. It is also necessary to adopt methods that will recognize the mutuality and solidarity of labor and to convert this craving for harmony and mutual support, as well as the impulse of individual ambition, into a productive asset.

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